

REMARKS

By the present Amendment, claims 1 and 4 have been amended to remove formula (1) as the Examiner correctly noted in interpreting the claims. The claims have not been further amended as applicants respectfully submit that the claims are patentable over the cited prior art, particularly newly relied-on WO 01/58976 (the WO '976 publication).

Before setting forth the reasons why the WO '976 publication does not disclose or suggest the invention as defined in the claims of record, applicants believe that a review of certain aspects of the invention and the results which can be obtained from the invention are in order. As recited in claim 1, one aspect of the present invention relates to a flexible polyurethane foam obtained by contacting a polyol composition (A) comprising 0.5 to 3 parts by weight of a polyetherpolyol (polyol (D)) having a defined amine value and a defined hydroxyl value that is produced by the addition of an alkylene oxide to at least one amine compound represented by defined formula (II) with an organic polyisocyanate. The polyol composition additionally comprises 0 to 99.5 parts by weight of defined polyol (B) and 0 to 99.5 parts by weight of defined polyol (C) with the polyols being in such a ratio that the sum is 100 parts by weight. Claim 4 recites the polyol composition, *per se*, using the same definitions and amounts.

The recited polyol composition enables a flexible polyurethane foam to be obtained that can exhibit reduced volatile amine emission and which has excellent characteristics that make the foam particularly suitable for seat pads and sound absorbing materials for automobiles. The advantages which can be obtained in accordance with the present invention are illustrated in the Examples that start on

page 25 and particularly the Tables starting on page 33. For instance, Examples 2 and 3 in Table 1 illustrate that when the polyol is produced by the addition of ethylene oxide to methyliminobispropylamine (within formula (2) of the independent claims), superior curability is obtained relative to Comparative Examples 2 and 3 that use polyols produced by adding ethylene oxide to ethylene diamine, a common aliphatic amine compound that does not meet formula (2).

With respect to Table 2, a comparison of Examples 5 and 6 shows that when the polyol is produced by adding ethylene oxide to methyliminobispropylamine (Example 5), superior results with respect to closed cell properties, elongation and wet heat compression set can be obtained relative to when the polyol is produced by adding ethylene oxide to 1-(2-aminoethyl)piperazine.

It will be noted that independent claims 1 and 4 both specifically recite the presence of 0.5 to 3 parts by weight of a polyetherpolyol (polyol (D)) having a defined amine value and a defined hydroxyl value that is produced by the addition of an alkylene oxide to at least one amine compound represented by defined formula (II). As explained in paragraphs [0071] and [0072], when the defined amounts of the polyol components are used, the noted advantages can be obtained. The latter of these paragraphs specifically explains that when the amount of polyol (D) is too small, sufficient curability cannot be obtained whereas when the amount is too large, moldability is deteriorated or the wet heat compression set ratio is adversely affected. Comparative Example 7 in Table 2 illustrates the adverse consequences of too much polyol (D) in the foam or composition while other Comparative Examples show the effect of too little polyol (D).

The WO '976 publication does not in any way disclose the defined foam or composition which includes 0.5 to 3 parts by weight of the polyol (D) having the defined amine value and the defined hydroxyl value that is produced by the addition of an alkylene oxide to at least one amine compound represented by defined formula. In the Official Action, the Examiner has attempted to correlate the polyol (b2) to applicants' Polyol (D). However, as plainly set forth at the bottom of page 4 of the document, (b2) is present in an amount of 5 to 100 parts by weight. Indeed, in Table 4 on page 28, the lowest amount is 20% by weight with Example 4B being 40.4% by weight.

By expressly requiring 5 to 100 parts by weight and illustrating amounts of 20 and 40% by weight, the WO '976 publication would lead those of ordinary skill in the art away from the presently claimed invention. Such a teaching cannot be ignored, particularly in view of decisions such as *In re Mercier*, 515 F.2d 1161 (CCPA 1975) which maintain that the relevant portions of a reference include not only those teachings which would suggest particular aspects of an invention to one having ordinary skill in the art, but also teachings which would lead such a person away from the claimed invention.

The WO '976 publication also does not appreciate that in the context of applicants' invention, one can obtain the advantageous results shown in the illustrative Examples which are superior to those of the Comparative Examples including aforementioned Comparative Example 7 which contains an amount of Polyol (D) above the amount defined in the claims. Thus, this represents a further reason why the claims of record cannot be rejected based on the WO '976 publication.

The additional reliance on Falke et al., U.S. Patent No. 6,087,410, to show the wet heat compression set ratio and density recited in dependent claims 6 and 7 does not remedy the substantial shortcomings of the WO '976 publication. Thus, even assuming for the sake of argument that a proper basis exists for combining the documents in the manner advanced by the Examiner, the claims of record are still patentable over this hypothetical combination of documents.


For all of the reasons set forth above, applicants respectfully submit that the claims of record are patentable over the cited prior art, especially in view of the technical evidence that has been provided, and therefore request reconsideration and allowance of the present application.

Should the Examiner have any questions concerning the subject application, the Examiner is invited to contact the undersigned attorney at the number provided below.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.20(d) and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800.

Respectfully submitted,

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